NECESSITY FOR A NEW ROUTE-SURVEY OF DIF-

To the Editor of The Tribune. Sin: The experience of the last two Winters has fully demonstrated the fact that the Salt Lake route to the Pacific will be subjected to serious interruptions and troubles from heavy snows, during the Winter months, to such an extent as to prevent the regular daily terially interfere with commercial intercourse and enterin interoceanic line, laid so far south as to traverse a belt of equable temperature, without snow or ice, subject to only a medium range of disturbance by rains or floods.

As early as December 16, the line west of Cheyenne was snowed in, and the President of the Central Pacific telegraphed from Sait Lake City, that he thought they should eck a route to join the Kansas road, to secure a practicable Winter line. And from the 12th of February to the h of March, the mountain section west of Cheyenne was blocked with snow for 200 miles, and passengers tramped through the snow 90 miles to reach Fort Laramie, leaving rs to suffer in the snows, and await their deliverance Mails are snow-bound by the tun.

There are several such routes or belts between the Mississippi River and the Pacific Ocean. But this country is so effectually divided by the Rios Grande and Colo rado that it may be considered as three distinct sections; from the Mississippi River to the Rio Grande; from the Rio Grande to the Rio Colorado, and from the Rio Colorado to the Pacific. First, and the oldest of these is the querque, New-Mexico, by which to reach the valley of Grande, or from Memphis by the valleys of the Arkansas and Canadian rivers to Alburquerque, or from Vicksburg and Shreeveport directly across Texas to El

As bet ween the Rio Grande and the Pacific there are but two routes, the one by the 35th parallel, from Alburda; and the other from near El Paso, via Tucson and ey of the Gila River, and Fort Yuma to San Diego. The former one has not been much traveled, while the has always been the route of overland travel

are agricultural advantages, and scarcely less ret named route, somewhat medified by the consolidation of the Kansas Pacific Road from Kansas City Kansas River and Smoky Hill Fork, now rests at Kansas, and seeks to cross to the Arkansas Fort Lyon, and thence by the Purgatory River Union, and to Albuquerque on the Rio Grande, nee to San Francisco by the 35th parallel route. I caves the Rio Grande at or near Albuquerque, saling along the San Jose or El Rito, crosses the dadre at Campbell's Pass, into the Valley of the Gof the West, to the valley of Flax River, and ide of the San Francisco Mountain, along the Valley on needles, at the north end of the Mojave Cañon.

ed for grazing, and agriculture, if the land were irri-d; but, lying in the Indian territory, white settle-ts are not likely to obtain in these valleys, and cors are not attracted thither. The Kansas route cors are let attracted thither. The Kansas route

and passing by the Jenus to Laguns, rather than by the El Rito.

Considering these lines as the same from the valley of the Rio Grande to the Pacific, the general description is about as follows: Leaving the valley of the Rio Grande either at San Felipé or Ysietta, the lines join at Laguns, and thence reaches the sumunt of the Sierra Madre, at Campbell's Pass, near Fort Wingate, in a distance of 120 miles, at an elevation of 2,375 feet above the Rio Grande, at Ysietta; thence by the valley of the Puerco of the West to the Rio de Lino (Flax River), and the foot of the San Francisco Monnianies, descending 1,400 feet, in a distance of 120 miles. The Flax River, where departed from, being about 10 feet lower than the Rio Grande. There are no heavy grades indicated on this route, except in the Cafon of the El Rito, and the work is remarkably light, scarcely equivalent to a six feet embankment the whole distance. But few cuttings, and three or four bridges.

The most difficult section of the route is in passing the San Francisco Mountains, where maximum grades and heavy work will be encountered. This mountain section may be said to extend from the crossing of the Flax River to the head of Val de Chino, at the western slope of 120 miles, 30 miles of which will be heavy mountain work, with grades of 89, 90, and 100 feet per mile, and probably greater, and possibly a tunnel 3,000 or 4,000 feet long, in hard rock.

From the head of Val de Chino, into Yampa Creek Valley, across Wallapi Valley, and adown the wash of Mendow Creek to the Colorado River, is a continuous descent of 5,730 feet in 150 miles for the greater part of this distance to character of the miles, traversing two or three cafions where grades of 116 feet per mile obtain for two, three, or four miles each. For the greater part of this distance to character of the work is remarkably light,

ient 20 miles long, rising 116 feet per mile-greater than on any permanent line of railroad in the United States or Europe. This bad feature cannot be avoided except by going to the ocean at San Pedro or San Diego. This bad feature would materially affect the cost of freightage if based on cost of operations.

6. The cost of lands for depots and shops would be very great at San Francisco; and the very ground sought to be occupied on the west side of the Bay of San Francisco, and would entail a hoavy expense in right of way and desirable location.

en route to the city, is controlled by the Sait Lake line, and would entail a heavy expense in right of way and desirable location.

1. There would not accrue any advantages in the matter of traffle or business for the road at San Francisco, that could not be controled from San Diego by coastwise steamers, controled by the Railroad Company; nor any advantage that would warrant or justify, at this time, the additional expenditure of \$20,000,000 for that sole purpose, especially considering the fact that the completion of the through line would be delayed four or five years thereby. Nor is it necessary to go to San Francisco to compete with the Sait Lake line, as the physical and climatic advantages of the Southern line are more potent by the San Diego line, avoiding the Techaolapay Pass section, with its steep grades and heavy snows. On the contrary, the following reasons are worthy of weight in favor of going to San Diego:

1. The ruling advantages of time, distance, cost, and gradients are Secured over the Sait Lake line, or the line to San Francisco, by the Tulare Valley.

Time. The California section of the line could be completed in, say two years time, as compared with, say five years, that would be required to build the section from San Francisco to the Colorado River, because of the cheaper construction and convenience of populated settlements.

Distance.—The transit of freight by rail would be, say, soo miles shorter from San Diego to Pittshurgh and points

Distance.—The transit of freight by rail would be, say, 300 miles shorter from San Diego to Pittsburgh and points east, and 240 miles less to Chicago, than by either the Salt Lake line, or Tuiare line, a saving in freightage of \$12 to \$15 per tun; and allowing \$2 per tun for freightage from San Francisco to San Diego, by the railroad company's own line of steamers, freight could be carried to Chicago and points east thereof for \$10 or \$12 less per tun, as well as passengers, than by either of the other routes; and oriental freights and passengers, in either direction, not touching at San Francisco, for \$15 or \$20 less per tun and head, on the usual basis of rates per mile; and if gradents, alignment, and cost of operations be considered, a still greater reduction of freightage may be predicated.

rous.—A saving in arst cost of \$20,00,000, and the ab-nual interest thereon, which interest alone would pay for two miles of tunneling, at the rate of \$10 per cubic yard, the probable cost of the most expensive material; or if applied to surface construction, would allow \$50,000 per mile for 24 miles, and enable a skillful engineer to re-duce the gradients, and improve the alignment of the San Diego line, if desirable.

greater resulting benefits are incident to the line of lesser cost.

2. The cost of lands for depots, shops, &c., at San Diego would be merely nominal, as lands have been set aside for such purposes by the Mission and town authorities, together with a gift of 10,000 seres of land for general purposes. A great advantage in comparison with the probable cost of such privileges at San Francisco.

3. Taking, as granted, that twenty millions of dollars would be saved in construction of road, by going to San Diego, instead of San Francisco, a part thereof could be applied to the construction of the road through the mountain passes, to reduce the grades, and shorten the line, and the remainder, or a part thereof, could be used in establishing a line of ocean steamships with eastern Asiatic ports to be controlled by the road, thus scentring the Oriental trade beyond a doubt; and this could be accomplished with far less money than would build the railroad to San Francisco.

4. As one half of the amount saved may be said to be Government subsidy, it may be claimed that the adoption of the San Diego line would save ten millions to the National treasury; one-fifth of which would construct the famous Sutro Tunnel, which the Government declines to aid. To economists this idea is one of special interest to aid. To economists this idea is one of special interest to aid. To economists this idea is one of special interest advantages of time, distance, grades, cost and climate, to be secured to the southern line over all others; distance and grades controlling the freightage and working expenses; time and cost railing in the matter of interests and dividends; and the climate maintaining the continuous and equable operations of the first told advantages. These reasons are sound, and the conclusions fairly drawn, and should be carefully considered in deciding on the Pacific terminus of the railroad, even if it should be built near the 35th parallel.

There ore the THE THERTY-SECOND PARALLEL.

The route of the 32d parallel would be g

of very easy gradients, the maxi-

tions. It is sid miles long, and traverses a gently-undulating plain country, of very easy gradients, the maximun being 65 feet per mile, and the average grades only
21 feet per mile, even including the Guadalupe mountain
section. The greater pertien of the line is well timbered
with pine and post oak timber, and is of a light sandy
soil, with a clay subsoil, and is known to produce well.
Of the section from the Red River to Phantom Hill, 400
miles, the engineer says:
"Well timbered and watered for the whole 401 miles; a
country in which I have resided for the last ten years,
and found an abundant yield every year to the farmer of
cotton, corn, wheat, tobacco, hemp, vezetables, and fruits
of every description. It may be regarded for the distance
400 miles on the line of the road, and extending on each
side north and south 100 miles, as the best wheat section
on the American continent."

This line could be so laid as to pass south of the great
staked plain, and lies in the valley of the Pecas River for
120 miles, and would reduce the section of desert plain
traversed to about 75 or 80 miles. The rich promise of
this fine agricultural section of Texas needs no comment,
and the very favorable condition of gradients is far better than the corresponding section of the Nebraska or
Kansas Pacific Roads. Whatever hostility may be expressed toward the corporation named (concerning its
rights and charter status, the savings made remain as
the evidence of the superiority of this route over those
names.

From El Paso the route should follow the valley of the

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From El Pase the route should follow the valley of the

Francisco Mountain and the Colorado River is scarcely better than the notorious California desert lying between the Colorado River and the Sierra Nevada, as regards its future promise or value. Nor is the section by Campbell's Pass much better.

There is grass with very little water, and nothing to invite pioneer settlements on the part of enterprising Yankees. The valuey of Flax River is crusted over with alkali, and the slopes of the Sierra Madre, in the approaches of Campbell's Pass, are civered with dense growths of grease wood.

There are no valuable mineral deposits yet developed or determined, which lie within casy access of the line. The valuable mineral region of Central Arizona lies on the southern slopes of the Magollon range, and would be reached with great difficulty from the 35th parallel line, as the intervening range is deeply crowded into impassable canyons.

as the intervening passable canyons.

The valley of the Colorado is of some value as an agricultural section, and by irrugation could be made very productive, and, if once well populated, would equal the valley of the Rio Grande; but now it is held by the Mo-

The only available timber on the line between the Rio Grande and the Sierra Nevada is the belt on the San Francisco mountain. The cottonwood in the valley of the Colorado and Mojave Rivers is of no value, and is found in very limited quantities. Some mesquite is found in the valley of the Colorado.

The line would not be of expensive construction; in fact, the most favorable conditions exist as to cost; fine valleys and wide, easy-rising mountain slopes lead up to easy summit passes. The principal difficulty of construction and grades occur on the San Francisco mountain and at Techachepay Fass. Numerous canyons are trayersed, where maximum grades will be necessary in lengths of one, two, three, and four miles; on the El Rito, at Las Romances, head of Val de Chino, Yampa Creek, and Railroad Pass, near Beale's Spring. The difficult grades occur at the head of Tulare Valley and in getting across the valley of the Colorado. In going east from the Colorado River there would be a continuous rising grade to the Picacho or La Laja summit, a distance of 145 miles, rising 5,670 feet, in three sections, with maximum grades, in passing from one valley to another, of three and four miles, and a heavy grade westward of the valley 80 feet per mile for 28 miles. In general the gradients are long, sweening ones.

The Sierra Madre, or Rocky Mountains proper, form the western rim of the Valley of the Rio Grande, their summit being 180 miles west of Albuquerque, at Campbell's Pass, and about 60 or 70 miles west from Fort Thorn, where they gradually disappear, and are lost in the plateau of the Mexican boundary.

The Mogellon runge breaks off from the western slope of the Sierra Madre nearly west from Fort Craig, and reaches to the Colorado River, being cut through by that river at the Mojave Canyon, and turning northward, form the Western rim of the Colorado Valley. This range has three distinct spurs putting out towards the north.

the Sierra Madre, within 100 miles of the Rio Grande, a runs weatwardly along the foot of the southern slope the Mogolian range, to the Colorado near Fort Yama.

The total of ascents and descents by the 35th in Albuquerque to San Diego, may be stated hile by the Rio Grante and Gila routes it

as 30.00; while by the Rio Grante and Gila routes it would scarcely be 15,000 feet.

The comparative distances are \$70 miles by Campbell's Pass and Flax River, and \$80 miles by the Gila Valley route and Jacomba Pass, and \$80 miles by the Gila Valley route and Jacomba Pass, and \$80 miles by Warner's Pass. The maximum grade in passing from the Rio Grande to the Gila is 60 feet per mile, and by Warner's Pass, about the maximum gradient will be 105 feet, with far less expensive work than on the Tehachapay Pass, but not much shorter. Judging from the report of Mr. Foole, and the information of Gen. Rosecrans, the Jacomba nor Warner's Pass is not more difficult than the Morongo Pass and Canyou, and far more favorable than the Techachapay Pass. Equating elevations by equivalent distances and adding to distances given, the results are: By the 30th parallel, 1,430 miles, and by the Gila River and Warner's Pass, 1,220 miles. Thus we have the comparative merits of the two routes as between Albuquerune and San Diego, as dependent on the physical geography of the country. On the 35th parallel route there will be from 50 to 40 miles of maximum grades of 116 feet per mile, and probably 60 miles of grades over 90 feet per mile, while on the Gila River route there is no more than 35 miles of grades over 90 feet per mile. There are no heavy grades on the Gila any where; nor in the crossing of the Sierra Madre; and the entire distance may be made without grades greater than 100 feet per mile.

There are many other cogent reasons why the Gila route is preferable to the other, all bearing upon the future prosperity of the country traversed, and its present and future contributions to the success of a great railway line.

Considering the two routes with regard to their negative.

Palmer.

By the Glia line there is but about 15 miles of desert to be crossed (between the Colorado River and the Sierra Novada), as compared with 250 miles between the Needles, at the Colorado, and Tehachapan Pass, to San Francisco; at the Colorado, and Tehachapan Pass, to San Pirancisco; or 150 miles to Mosongo Pass, on the San Diego line; not to mention the 150 miles of semi-desert lying east of the Colorado, on the thirty-fifth parallel. The valley of the Mojave River is of no great value, agriculturally; it does not support the military station of Camp Cady.

The crossing of the Colorado River at Fort Yuma is but about 500 feet wide, with natural granite banks for abutments, as described by Gen. Rosserans and others, while at the crossing at the Needles the width is 1,000 feet, with rock banks and gravel surface.

ments, as described by Gen. Rosecrans and others, within at the crossing at the Needles the width is 1,000 feet, with rock banks and gravel surface.

Taking into consideration the separate costs of the two lines, as between Albuquerque and San Diego (to be equal), and the local conditions of development for future commercial purposes, then will the Gia River line be the better of the two, because of the more favorable gradients, the condition of traversing the valley of the Rio Grande, its double character as a connecting line, and its proximity to the southern boundary.

The relative local conditions of the two lines as between Albuquerque and San Diego may be more foreibly stated thus: There is no running water on the line of the 35th parallel, between the site of old Fort Wingate and the mouth of the Zuni River—a distance of 150 miles; and none between the crossing of Flax River and the Colorado—a distance of 300 miles. And in all that distance there are but four or five springs that furnish water enough to feed a railroad water-tank, viz.: Aqua Azul, near Fort Wingate; near new Fort Wingate; Lareaux's Spring, on San Francisco Mountain; Truxton Spring, on Yampa Creek; and Beales Springs, hear Railroad Pass; at the head of Meadow Creek Wash; and San Francisco Mountains, at intervals of 40 to 60 miles. On the 35th parallel route only one-eighth of the distance lies along with running streams; and by the Rio Grande and Gilla route, three-fourths of the distance, the line runs with large running streams of perpetual water. On the 35th parallel route only one-eighth of the distance and Gilla route, three-fourths of the line lies over an arid desert; and considering the section from Covero to Flax River, and from Partridge. Creek Valley to the Colorado, as without agricultural promise (whatever may be claimed to the contrary, there

immediate future development along the line. The conterprise and development for Arizona is already established in the valley of the Gila. On the contrary, nothing of the kind has taken place on the northern slopes of the Mogolion range, nor is there anything, or natural conditions to invite settlement there.

There is nothing on the 35th parallel to indicate that any people but normalic Indians over roamed or dwelt there, but, in the valley of the Gila, ruins of great houses (Casas Grande), once populous villages and cities, clearly prove that the valley was once densely populated, and were devastated and depopulated by the merciless indians. The same kind of evidences are strewn over all the Northern Mexican States. The two routes have a comparative and relative value as to the probable future railway lines leading eastward from the valley of the Rio Grande, that should not be overlooked in the discussion of their merits.

There are but two places, in general estimation, where the valley of the Rio Grande should be entered by a railroad line from the East. The local development and population center near those points, and may, to some extent, influence their estimation—Albuquerque and El Paso. The present railroad enterprises prominently before the public, looking toward the Rio Grande, are the Kansas Pacific, by the old Cimarron route, and a line via Fort Smith and the Canadian River to Albuquerque, and a line through Texas, from near Shrevesport, to El Paso, all having about equal future prospects as important oceane routes. Now the Thirty-fifth parallel route would connect with the system reaching eastward from Albuquerque, and the Pacific. An expensive link only 850 miles (t) long, across a semi-desort country, subject to the unfavorable conditions already told; whereas the Gila route would connect with the worthless lines at Albuquerque, and with the Southern lines at El Paso, with a self-sustaining section of 700 miles in length, possessing the positive advantages and favorable conditions as stated abov

terprises castwart of the Rio Grande, at these conditions of necessity of adaptation to each other may take place in a few years, and any corporation weighing the relative value of the two lines must consider them as tending to

such a result.

Considered from a domestic, national point of view, the

Considered from a domestic, national point of view, the Gila line has several advantages in the matter of supplying the frontier military stations in Arizona, New-Mexico, and Western Texas, facilitating postal intercourse, and consequent reclamation from the Indians, and early development of that region, none of which favorable conditions are incident to the Northern reute.

Hegarding the lines in an international sense, the Gila route has preeminent advantages, either as regards peaceful commercial intercourse or warlike relations. El Paso would be the grand strategic point of the frontier—of easy access from the east, north, and west—and Fort Yuma, a great center of coastwise operations. No similar conditions could be considered as incident to

Fort Yuma, a great center of constwise operations. No similar conditions could be considered as incident to Albuquerque or Fort Mojave, on the northern route.

All the arguments thus far presented are applicable as bearing on the merits of San Francisce and San Diego as the Pacific terminus of the proposed railroad, and clearly indicate San Diego as the proper terminus of the great southern railway line of the United States.

If San Pedro had any roadstead there would be some reason for considering its value as a terminus, but as nature has not provided for San Pedro as for San Diego, as a harbor, further comparison is not even provoked.

It may be well to remark here that the oft-mentioned idea of a failroad from the valley of the Rio Grande to Guaymas, on the Gulf of California, is barely worth mentioning at the present time as a necessity, as the Gia line is quite as near to Guaymas at Port Yuma by water as the vicinity of El Pase by land; and, if not

water as the vicinity of El Paso by land; and, if not quite efficiently because of the difficult navigation of the Colorado, 70 or 8) miles of railroad would reach to the head of the gulf, as compared with 450 miles of railroad over land.

It is hardly worth while to allude to the politice-national benefits of the more southern line as a frontier intional benefits of the more southern line as a frontier in-fluence tending toward the acquisition of territory, a laudable State ambition to add to the national domain

laudable State ambition to add to the national domain by the natural spread of republican prosperity and the fostering stability of commercial energy. The Gila line would be a powerful annexation influence, and it should be kept in mind that the inhabitants of Senthern California, Arizona. New-Mexico, and Texas, and of Mexico, are descended from a common Spanish Mexican stock, and are mutually drawn together and have a common sympathy and a mutual interest of consanguinity.

Thus far the subject has been presented as it appears and presents itself to those looking out a railroad line by the lower latitudes of our own national domain, that will serve the greatest number of interests and enterprises, and yield the quickest and largest returns of the investments made therein. The result of the labors of the many Government surveys made by reliable and competent officers of the United States Army indicate like conclusions.

It is more than probable that the capitalists of San

It is more than probable that the capitalists of San Francisco and California will look upon these arguments and deductions therefrom as detrimental to their State and eity prosperity, and cry out against the general scheme that does not adopt their city as the Pacific terminus, but they must consider the subject under every shade of color, and from every standpoint.

1. California people are so deeply absorbed in the mining interests of the Pacific States and Teyritories, that they do not seem to be disposed to show such material interest in the enterprise as to take hold and build the California section of the line, even if it should come to San Francisco; and it the entire line is to be constructed from the East by Eastern capital, then they should be left to choose their route, decide the terminus, and consuit their own interests, without hindrance or interference.

2. If, on the contrary, there is a material interest and sympathy expressed toward the enterprise, and a sufficiency of means available and seeking investment in this enterprise, with a view to secure the terminus at San Francisco, let them consider the arguments presented in this paper concerning the choice of a Facific terminus.

3. Presuming that the additional 300 miles of road necessary to be constructed to take the railroad to San Francisco, would not cost less than \$20,00,000, and prob-

a. Presuming that the additional 300 miles of road necessary to be constructed to take the railroad to San Francisco, would not cost less than \$20,000,000, and probably not less than \$25,000,000, and granting that the one half thereof may be Government subsidy, there would need to be raised \$10,000,000 of private and corporate aidmore than one tenth of the value of the real and personal property of the County of San Francisco; and this to be done for the almost sele purpose of keeping the terminus from San Diego—to forest. The Plago. Now to control the California section in this way, California capitalists must choose between the Fort Majave line, 575 miles long (probable cost \$35.00, 0.0) and a line down the coast by Santa Margarita, Foint Concepcion, Los Angeles, and San Gorgonio to Fort Yuraa, of the same length (and same probable cost); either line a formidable undertaking, and of far greater magnitude than the Sutro Tunnel of Nevada—which they have not undertaken, and in which they have a material interest.

Now, taking for granted that the means to control the California section, to the amount of, say \$18,000,000, are available, how can it be applied with the best result, and to the best interests of California, and which line would return the greatest and quickest dividends on the capital invested?

Let us consider it first in the darkness of jealousy of San Diego. Ban Francisco is the great natural currespot of national commerce for the Pacific Coast, and no

San Diego. San Francisco is the great natural entre-pot of national commerce for the Pacific Coast, and no application of money or engineering skill in harbor im-provements, else where on the coast, can lessen her supre-imacy in that particular. Ean Francisco grows in wealth

and importance in the same ratio in which the adjacent valleys are developed, and her coastwise influence expands in the proportion of the growth of her tributary centers of the leaser commercial systems that debouche upon the coast north and south of her. Their interests are mutual. If the smaller commercial ports retrograde from commercial prosperity, she must be affected injuriously by their decilning commercial intercourse, and, on the contrary, her progress is stimulated by their increasing importance. ronce Canyon is described as being very difficult by Gen;

on the contrary, her progress is stimulated by their increasing importance.

Does New York decrease in Importance or decline in prosperity while Bostor, Philadelphia and Baltimore are augmenting their commercial relations! Have the rapid growths of Chelminti, Chicago, and St. Louis, as great internal centers of commerce, in the least retarded or been detrimental to the interest of New-York, Philadelphia, or Baltimore! Is London in any way shorn of her supremacy as the metropolis of Britain or Europe because Liverpool is the shipping port for the New World? Why, or in what way would it benefit San Francisco to deprive San Diego of her natural right as a railroad terminus? On the contrary, what could benefit San Francisco and California more than the early growth of San Diego into a second-class city and entrepot?

The next and most important feature of this enterprise is that of quickest and largest return of the capital invested, and to this will capitalists most eagerly turn. One railway connection the Sait Lake line) is nearly completed, and in taking in hand another line, either by the same or another corporation, a comparison must be unade therewith, with a view to judge of the advantages to be gained by the newer enterprise; and setting aside the advantages of more favorable grades, climate, and

made tucrewith, with a view to judge of the advantages to be gained by the newer enterprise; and setting aside the advantages of more favorable grades, climate, and other physical conditions of the southern line, they will at once inquire into the relative distances and the cost of freightage.

at once inquire into the relative distances and the cost of freightage.

Now, if the proposed line be built from San Francisco, there would acarcely be 10 miles of difference between the two routes, to Pittsburgh and common points east thereof; and consequently no reduction or saving on freightage. Grades do not control the rates of freightage. They reduce the expenses of operating and increase the dividends; and when the meteorological conditions of the two lines should be alike, they would be on an equal basis as to facility for freight or travel, except as to the advantages arising from the connection with the railway system of the Southern States, the southern Atlantic seaports, and while New-York continues the metropolis of the Atlantic seaboard, but little advantage would arise therefrom.

of the Atlantic scales, the reference therefrom.

Now, considering San Diego as the present probable terminus of the railway line, a line of coastwise steamers between San Francisco and San Diego under the management of the railway company carrying the company's freights, would enable that railway company to carry freights and passengers to Chicago and New-York at \$10 or \$12 less per tun and head than by the Salt Lake line.

viewing the Southern line, as exclusively a California Viewing the Southern line as exclusively a California enterprise, it seems apparent that the best results will be secured by constructing that portion of the line between San Diego and the Colorado now, and open the line to San Diego as the terminus until such a time as circumstances shall necessitate the construction of the coastwise section, for the following reasons:

1. It would require the present construction of only 160 or 180 miles of road, at a cost of say \$8,000,000, or, one-half being Government subsidy, only \$8,000,000 of private means would be required to complete the California section.

section.

2. The California section could be completed and begin operations as an independent line to the Colorado (and be self-sustaining) in one year from its commencement, while the San Francisco line would not, nor could not, be

be self-sustaining in one year from its commencement, while the San Francisco line would not, nor could not, be opened under five years to the Colorado River. Comparing the facilities for working each way from the Colorado River at Fort Mojave and Fort Yuma, the more southern line could be completed to the Rio Grande from three to five years sooner than could the San Francisco and Fort Mojave line, the difference in distance being about 450 miles in favor of the Fort Yuma line, from San Diego, thus realizing earlier income and dividends, and saving greatly in the matter of interests.

3. The development of the Colorado and Gila River valleys, and the New-Mexico and Arizona unineral regions, will take place from four to five years earlier, and the trade with Sonora quickened correspondingly.

4. In asking aid from Congress, there would be some merit in adopting the shortest line; and there would be some advantage in asking for aid on four instead of eighteen millions; certainly a very strong recommendation to Congress, and a self-denial worthy of reward.

Aside from these considerations, it seems that the California interests would be eighanced by constructing the road down the coast, by either route, to San Diego, or its vicinity, and thence to Fort Yums. In preference to going by Tehachapay Pass to Fort Mojave, for the foliowing reasons:

1. The route would lie all the way in a rich grazing and

reasons:

1. The route would lie all the way in a rich grazing and agricultural region, with a present population ready and eager to spring into active enterprise, and to bring the productive agencies into instant work, excepting the 75 miles of desert; while between Tehachapay Pass and Fort Mojave, a distance of 250 miles, there is positively nothing but a dry, arid waste, that cannot be developed into any future benefit to the road. And this section would be built for the sole purpose of connecting with some enterprise that comes 500 miles through a barren wilderness of dry valleys of greaswood, and across rocky plateaus covered with eactl, yucca, and stunted cedar, for the sole purpose of meeting and congratulating each other upon the future of the Mojave Valley, when the Mojave Indian and their conferces are civilized, an event that may occur in the next 50 years.

2. By constructing the line down the coast, the rich plans of Los Angeles and San Bernardino would be traversed, the most valuable region of Southern California; the only region that could now, or early in the future contribute to the business of a road; and thus the road would be more or less a success within itself, as a local line, and develop a really valuable portion of the State.

3. The line would terminate at the mouth of the great and rich agricultural valley of the lower Colorado, and of the fifth, and command whatever of value how exists or

the Gila, and command whatever of value how exists or may hereafter spring up in those valleys, and the interior of Arizonte, by being at the base of the water sheds; a very great advantage as compared with a position four hundred miles up the river with a precarious navigation; nor would any of the advantages of the more northern route be inapplicable to the southern line, as the two lines might be made common over the valuable part of the Tolare valley.

4. Whenever the work shall begin, even on the line down the coast, there will be a necessity to construct a branch line to San Diego to the main line, wherever it may be, to facilitate its earlier completion, the faverable condition of harbor governing, as between San Fedro

in consequence would be more tardily constructed. In this way San Diego would be ruled in.

In view of all these considerations it seems that the best interests of the citizen and city, the State and the nation, would be promoted by constructing the road to San Diego by the Gila River Valley, and open it for business as early as practicable, and connect with San Francisco by coastwise steamers; and with the land franchise in hand, and subsidy provided, begin the construction of the road from San Francisco to San Diego, and finish it as the country through which it passes is settled up and developed, drawing but lightly on the Government in her present necessities; and by the time the country is developed, and when the circumstances are a warrant therefor, the through line will be completed and be sustained by its local traffic, and all this within say two years, and then will San Francisco forget that she was ever jealous of San Diego; and last, but not least, the National Congress will weigh well the relative advantages of the two routes from a national point of view, and can scarcely healtate to aid that enterprise which asks the least yet promises the more, especially if the line which costs the least has the greater advantages now and for the future.

Although this paper more particularly discusses the

which costs the least has the greater advantages now and for the future.

Although this paper more particularly discusses the relative advantages of the two routes between Albuquerque and San Diego, with a view to show the pre-eminent favorable conditions of the Glia line; yet the arguments are equally potent in favor of the 324 parallel route from Shreveport to San Diego, via El Paso, in comparison with the Kansas-Pacific, or the Canadian Fork inc.

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The El Paso line is more favorably conditioned as to coat and gradients, and has all the advantages herein predicated in favor of the Glia River line, and should be the only line constructed between the Rio Grande and the Factile, to which the Kansas line should join by going down the valley of the Rio Grande.

Nothing could contribute more to the early recitablishment of commercial prosperity in the new South, or more effectually bring about the reconstruction of their political and civil rights, or more certainly renew the social, commercial, and political good-feeling and intercourse between the North and the South than the construction of the Sad parallel railroad line, inspiring the enterprise of the South with new vigor, set her railroad trains flitting here and there, augmenting the importance of their scaports, and increasing their commercial intercourse with foreign ports and nations. Such a condition of prosperity would so absorb their attention and tax their energy that the errors and jealousies of the past would be well nigh forgotten, and peace and prosperity dwell through all the land.

ENGINEER.

BRIGHAM YOUNG DEFIES THE GOVERNMENT. According to The Utah Reporter Brigham Young expressed himself very frankly as well as forcibly concerning the United States Government, in his last sermon before a Mormon Conference recently held in Sals Lake City. He first paid his respects to former Administrations:

"Whom did they send here for officers? The vilest scal lawage that could be raked out of hell. The d-dest set of rascals they could pick up, who did us all the harm they could. But we have grown in spite of them ; we ask no odds of them, and if these d-d low-lived fellows that are now crowding in here give us any trouble we will rise up and put every one of them right out of the Territory ! We will make them leave; we won't have such a d-d set among us! There was old Drake, the d-dest old rascal in the country, that said he 'loved to d-n the Mormons ; in the country, that said he loved to d-n the atormons; he'd get up at midnight and walk ten miles over thistles to d-n them, and he'd d-n any man that wouldn't d-n them; and I say G-d d-n any, and God will d-n him and all such scallawags as thay send out here. And these men are the representatives of Congress. And of the President. Who goes into the White House in these days! A gambler and a drunkard. And the Vice-President is the same. And no man can get either office unless he is a gambler or a drunkard, or a whore monger or a thief. And who goes to Congress! You may hunt clear through the Senate and the House, and if you can find any men that are not liars, thieves, whore Brongers, adulterers, gamblers, and drunkards, I tell you they are mighty few, for no other kind of men can get in there.

They sent an army here to destroy the Saints. And when that army got to Fort Bridger! told them to stand off. I sent word to the Colonel: "This land where you are is mine; I bought if, and paid fify money for it; but you can stay there. But if you attempt to encreach any further upon us, we'll kill you all!" The Colonel said if I caused one drop of blood to be shed, there would be millions shed in return. I told him to keep off, to go where he would, but not to come on us. And they did keep off; and they didn't hurt anybody; no, nor they never will be able to hurt anybody, as long as the Saints are united. They came and they went, as so many others have come and went, and new if these Gentiles give us any more trouble we'll drive them every one right out of the country. We won't be bothered with them. The d-d scalawags can't hurt us as long as we're united. We defy them all! And we ask no odds of the Government.

That every word was spoken, as here published, says he'd get up at midnight and walk ten miles over thistles

That every word was spoken, as here published, says The Reporter, we have the most positive proof. If such things are spoken in public, what must be their utterances in secret council? If such are their open expressions, what must their thoughts and feelings be ?

THE VELOCIPEDE.

ITS WORTH AS A MEANS OF TRAVEL—THE RE-SULTS OF FIVE MONTHS' EXPERIENCE—THE

VARIOUS MACHINES-NUMBERS IN USE. Seldom, if ever, has any Parisian novelty as has the velocipede. Whon, through the press, we heard of its general use by all classes in Paris, to what practical use it had been put by merchants, messengers, postboys, &c., no wonder so many of our citizen halled the invention with pleasure, for in it it was fondly boped, was the long-sought re-hef from overcrowded cars and stages. In a very

hef from overcrowded cars and stages. In a very short time numerous schools were opened where the art of skillful riding the bicycle was taught to thousands, old and young. It is really astonishing to what an extent the fever has raged; many gentlemen past the prime of life have been fascinated by the graceful little steed, and after much hard work have succeeded in taning it, and now in many of the exercise bulls may be seen the gray-haired father and his sons whirling around the toom on bleyeles, and, in many cases, the paternal puts the youngsters to their best to keep up with him.

Of the various styles of velocipedes—one, two, three, and four-whoeled—the two whoeled has become the almost universal favorite. The peculiar fascination of being able to balance one's self upon a contrivance that will not stand of its own accord has be witched many into trying it, who could not be tempted to try one that would stand alone, and than the motion of a bleyele is so much more graceful than all others, and it takes up so little space that it is not to be wondered at that the three and four-wheeled machines meet with comparatively little favor.

capital that has been invested in this ely and Brooking by parties interseted in this ely and Brooking by parties interseted in this ely and Brooking by parties interseted the here are of the manufacture of the different spies. Wood Brothers, the well known carriage makers on Brondway, are very largely engaged in this business, and have up to the privactivity writing sold over 500 machines, and have only to the privactivity writing sold over 500 machines, and have only to the privactivity of the privactivity of the business, and have up to the privactivity of the business, and have up to the privactivity of the business, and have up to the privactivity. Their privace is the constructed of the best material and the privace is the second of the best riders using them exclusively. Their privace range from \$135 to \$300. Privacting & Davis of Greene-St., manufacture a very asperior machine. Mr. Wm. Prickering is the inventor. It is almost entirely different in its construction from the French model so generally used by other makers. It is without doubt the favorite machine at present in use, although one of the highest priced. Mr. Pickering has a large number of men at work, and personally superinteeds the structure of every machine he turns to; be filled. Most of the underline he turns to; be filled. Most of the undefined he turns to; be filled. Most of the undefined by Massrs. A. T. Demarcs & Co. of Brondway. This is all privacy and the public shown in the most artistic manners. made by Massrs. A. T. Demarcs & Co. of Brondway. This is all great a very difficult bridge from any other machine, the balance being maintained for the brown and the public fivent princips for may more one of the machine, the balance being maintained for the public provent to the hind wheel. It is claimed by Mr. Demarcs that by parting all the weight on the hind wheel, independent of the books of the firm privace is the size of the driving wheel in proportion to the hind wheel. It is an infection making the fore or driving wheel a substite

eral other parties claim to have invented unicycles, but as yet no really practical one wheel velocipede has been invented, and it is exceedingly doubtful if there ever will be. But few persons can have any idea of the greatnumber of schools for bloycle riding that have spring up all ove the country within the past few months. In this and the adjoining cities alone, there are over one hundred schools, in which for machines alone a capital of nearly a quarter of a million of dollars has been invested. High rehts and attendants will, no doubt, make up a total of half a unition of dollars that is now invested in velocipede schools. The Pearsail Bros. opened the first velocipede school in the city some months ago, and since then, the number of schools has increased very rapidly, and now Now-York and Brooklyn afford to velocipedists facilities second to no other cities.

The Empire Velocipedrome, that the Empire Skating Rink, in Third-ave., is undoubtedly the flaest exercise

city some months ago, and smear the body and Brooklyn aford to velocipedists facilities second to no other citigs.

The Empire Velocipedrome, (late the Empire Skating Rink,) in Third-ave., is undoubtedly the finest exercise hall in the country. A floor, 200 by 350 feet, affords the rider all the room he could desire. The prop ricross of this establishment have introduced a feature that is the rider all the room he could desire. The prop ricross of this establishment have introduced a feature that is the ond will prove very damaging to their reputation. Women velocipedists a la Black Crook are not calculated to enhance the respectability of a velocipedrome, and is to be hoped that such objectionable exhibitions will be dispensed with ancreafects. Over 80 machines are used at this place, most of them first-class, and are let out by the hour. Seaso are provided for over a Housans are plantanced of gus-lets it presents a such date in the plantanced of gus-lets it presents a such date in the plantanced of gus-lets it presents a such date in the plantanced of gus-lets it presents a such date in the plantanced of gus-lets it presents a such and the first half on the half on Broakway and The Hamil Tally have about 15 machines in use, mostly Polletring. At this half machines are in use, nearly ciphtnest, where about 20 machines are in use, nearly ciphtnest, where about 20 machines are in use, nearly all first-class. Pickering, Wood's and Demarests. Machines may be hired here by the hour. Leffingwell's, Broadway and Twenty-second-st., is a fivorite resort for velocipedists. He has 15 machines of this resort for velocipedists. He has 15 machines of the first to open a school down-town were it a Percyc's Sons. They have mostly machines of different patents. Among the first to open a school down-town were it a Percyc's Sons. They have in use of machines of different patents. Among the first class mechanics and the special base velocipede fever raged to a greater extent thought and the velocipede fever raged to a greater ext

There are a great many other halls in Brooklyn and the Eastern District. Jersey City must not be left out, for she has a Velocipedrome of which she has every reason to be proud, even if she did have to import a New-Yorker to run it. There is not a better conducted Velocipedrome in the country than the Jersey City institution managed by Frank Rivers. The Velocipedrome under his management sets a good example for others to follow. He runs about 50 machines, which, with the exception of the Witty's, are all first class. He has inaugurated a series of weekly races, and other novelties that cannot fail to be profitable to him and velocipedists in general.

Much has been said about ladies riding the bicycle. Of course there has been much said against it, and as much in its favor. Why shouldn't they ride if they choose to I if it is healthy and invigorating for the male sex, why not for the fomale! There are several lady experts